

WRITING FORMULAS (CRISS-CROSS METHOD)

Name _____

Write the formulas of the compounds produced from the listed ions.

	Cl^-	CO_3^{2-}	OH^-	SO_4^{2-}	PO_4^{3-}	NO_3^-
Na^+	NaCl	Na_2CO_3	NaOH	Na_2SO_4	Na_3PO_4	NaNO_3
NH_4^+	NH_4Cl	$(\text{NH}_4)_2\text{CO}_3$	NH_4OH	$(\text{NH}_4)_2\text{SO}_4$	$(\text{NH}_4)_3\text{PO}_4$	NH_4NO_3
K^+	KCl	K_2CO_3	KOH	K_2SO_4	K_3PO_4	KNO_3
Ca^{2+}	CaCl_2	CaCO_3	Ca(OH)_2	CaSO_4	$\text{Ca}_3(\text{PO}_4)_2$	$\text{Ca(NO}_3)_2$
Mg^{2+}	MgCl_2	MgCO_3	Mg(OH)_2	MgSO_4	$\text{Mg}_3(\text{PO}_4)_2$	$\text{Mg(NO}_3)_2$
Zn^{2+}	ZnCl_2	ZnCO_3	Zn(OH)_2	ZnSO_4	$\text{Zn}_3(\text{PO}_4)_2$	$\text{Zn(NO}_3)_2$
Fe^{3+}	FeCl_3	$\text{Fe}_2(\text{CO}_3)_3$	Fe(OH)_3	$\text{Fe}_2(\text{SO}_4)_3$	FePO_4	$\text{Fe(NO}_3)_3$
Al^{3+}	AlCl_3	$\text{Al}_2(\text{CO}_3)_3$	Al(OH)_3	$\text{Al}_2(\text{SO}_4)_3$	AlPO_4	$\text{Al(NO}_3)_3$
Co^{3+}	CoCl_3	$\text{Co}_2(\text{CO}_3)_3$	Co(OH)_3	$\text{Co}_2(\text{SO}_4)_3$	CoPO_4	$\text{Co(NO}_3)_3$
Fe^{2+}	FeCl_2	FeCO_3	Fe(OH)_2	FeSO_4	$\text{Fe}_3(\text{PO}_4)_2$	$\text{Fe(NO}_3)_2$
H^+	HCl	H_2CO_3	H_2O	H_2SO_4	H_3PO_4	HNO_3

NAME _____
 DATE _____ CLASS _____

WRITING FORMULAS 1

- For each compound write the symbols in correct order.
- Write the charge above each symbol.
- Add subscripts to balance formula.

compound name	first element symbol & charges	second element shown	correct formula no charge shown
1. sodium fluoride	Na^+	F^-	NaF
2. strontium chloride	Sr^{2+}	Cl^-	SrCl_2
3. potassium chloride	K^+	Cl^-	KCl
4. magnesium bromide	Mg^{2+}	Br^-	MgBr_2
5. potassium iodide	K^+	I^-	KI
6. calcium oxide	Ca^{2+}	O^{2-}	CaO
7. aluminum oxide	Al^{3+}	O^{2-}	Al_2O_3
8. boron nitride	B^{3+}	N^{3-}	BN
9. arsenic oxide	_____	_____	_____
10. zinc sulfide	_____	_____	_____
11. sodium sulfide	Na^+	S^{2-}	Na_2S
12. potassium bromide	K^+	Br^-	KBr
13. magnesium oxide	Mg^{2+}	O^{2-}	MgO
14. lithium chloride	Li^+	Cl^-	LiCl
15. silver chloride	_____	_____	_____
16. calcium fluoride	Ca^{2+}	F^-	CaF_2
17. sodium oxide	Na^+	O^{2-}	Na_2O
18. aluminum nitride	Al^{3+}	N^{3-}	AlN